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“CODE LABOR”: An Evidence Based and Interdisciplinary Approach to Managing Women Experiencing Precipitous Labor Outside of the Labor and Delivery Unit

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"CODE LABOR": An Evidence Based and Interdisciplinary Approach to Managing Women
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LOCAL PROBLEM

Precipitous deliveries can incite adverse obstetrical events and poor outcomes. In one rural northern Alabama hospital, 75-100 babies are delivered monthly with an average of two precipitous deliveries occurring monthly.

OBJECTIVE

The intent of the work was to address a cohort of obstetrical (OB) and emergency department (ED) nurses' knowledge gaps regarding the care of women experiencing precipitous labor outside of the labor and delivery (L&D) unit. DESIGN A quasi-experimental design aimed at quality improvement at the healthcare system's level was developed. A non-probability, quota sampling method was used to gather data.

PARTICIPANTS

Fifty-seven ED and OB RNs participated.

INTERVENTION/MEASUREMENTS

Education specific to managing women experiencing precipitous labor was presented. Surveys were conducted to evaluate perceived limitations and improvements in interdisciplinary teamwork and communication.

RESULTS

Pre-educational data revealed moderate-well communication was felt to occur between the OB and ED nurses and 50.8% of participating nurses felt comfortable or neutral when caring for an OB patient experiencing precipitous labor and delivery. Post-educational data revealed improved interdisciplinary communication and RN comfort level. Nine out of 343 women

experienced precipitous labor during the project's time frame. Seven delivered within 7 to 40 minutes after arriving to the L&D unit and two deliveries occurred outside of the L&D unit.

Interviews revealed positive utilization of the CODE LABOR policy. Hospital Consumer Assessments of Healthcare Providers and Systems (HCHAPS) data were evaluated for process improvement related to patient experience. Data in the last quarter 2018 disclosed an 84.3% satisfaction rate of nurse/patient communication and a 70.6% recommendation of the hospital to friends and family. First quarter data 2019 revealed an 80.2% satisfaction rate of nurse/patient communication and 71.7% that would recommend the hospital to friends and family.

CONCLUSION

Instituting an interdisciplinary policy helps nurses increase assessment skills, critical decision making processes, communication, and teamwork.

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Problem Description

In 2016, the Centers for Disease Control (CDC) reports that 3.95 million deliveries occurred in the United States (2018). If one considers Suzuki’s precipitous labor statistic of 2% (2015), approximately 80,000 precipitous deliveries occurred in 2016. Errors in communication, improper teamwork, limited knowledge and confidence from emergency department (ED) nurses regarding care of women experiencing precipitous labor, and lack of organizational policy directing the care of women experiencing precipitous labor and delivery outside of the labor and delivery (L&D) unit have been reported to cause more than 70% of adverse obstetrical events (Smith et al., 2013). In the L&D unit at rural hospital in northern Alabama, 75 to 100 babies are currently delivered monthly with a reported average of two precipitous deliveries occurring monthly (Women’s and Children’s Department Director, personal communication, September 5, 2018).

Available Knowledge

Because this hospital lacks a nursing policy that specifically directs the care of women experiencing precipitous labor outside of the L&D unit and the limited knowledge ED nurses have about labor and delivery, it is important that policies and procedures are in place to appropriately manage this patient population. In an Emergency Nurses Association (ENA) Position Statement, it is noted that more than 750,000 patients are treated in the ED for obstetrical and gynecological complaints each year (ENA, 2018). It is expected that emergency providers are to administer competent care and manage emergent situations with obstetrical emergencies.

In communication with the Director of Women’s and Children’s Services at the rural hospital in northern Alabama, two precipitous labor occurrences were reviewed, and root-cause analyses completed. In the two instances, it was noted that miscommunication occurred between the ED and obstetrical (OB) nurses. Lundeen, Padilla, and Rhodes (2015) report that poor obstetrical outcomes, such as perinatal death and injury, have been linked to poor communication.

Also, while completing investigative rounds at the hospital, the author noted that a precipitous delivery kit was not easily located by the ED nurses in the ED. Additionally, the kit was not easily accessible and important items were missing. There were no sterile blankets, identification bracelets, or suction equipment in the kit. Improving interdisciplinary communication and teamwork with an aim of quality improvement can impact nursing greatly. Adding necessary items such as sterile blankets, bulb suction, and identification bracelets to a precipitous delivery kit can easily assist with preventing errors and poor outcomes. Heightened performance of evidence based practice (EBP) and better management of women experiencing precipitous labor are expected changes.

The author performed a broad inquiry in the Cumulative Index of Nursing and Allied Health Literature (CINAHL), the Cochrane library, Medline, PubMed, and Google Scholar databases using the key words obstetrical emergencies, precipitous deliveries, and emergency deliveries.

Three common topics that emerged from the review of literature included (1) how standardized processes and team training can improve knowledge, (2) how utilization of emergency response teams trained in standardized, evidence based obstetrical triage improve patient care, and (3) how the effectiveness of team training in the healthcare industry influences

organizational and patient outcomes. Subrahmanyam, Joseph, and Abraham (2017) postulated that nurses should be acquainted with correct triaging of obstetric emergencies to safeguard the life of the pregnant woman and fetus. Ruhl, Scheich, Onokpise, and Bingham support that standardization of triage improves communication among the healthcare team and if implemented appropriately, patient care is improved (2015). Depending on organizational preference, OB triage tools can be adapted from a unified source or can be developed individually. Regardless of its development, a standardized OB triage tool can decrease inconsistencies in care, decrease poor patient outcomes, and enhance EBP management of OB emergencies.

The use of emergency response teams trained in OB management are supported by the articles published by Subrahmanyam, Joseph, and Abraham in 2017, the article from Ruhl, Scheich, Onokpise, and Bingham in 2015, and the guidelines published by ACOG in 2016. Additionally, the effectiveness of team training in the healthcare industry and its influences on organizational and patient outcomes are supported by the articles from Hughes et al., (2016) and Onwochei, Halpern, and Balki (2017). Team-based training includes learning to collaborate with decision making and simultaneously improve communication and performance of team members. It is believed that patient safety and satisfaction can be improved by team-based training (Onwochei, Halpern, & Balki, 2017) and it encourages an air of comradery between team members and imparts expectations of respect for one another’s knowledge and experience. The article by Hughes et al. provides strong evidence to support the theory that team training improves knowledge and stronger task performance when compared to individual performances (2016).

Research indicates that there are a number of approaches to assessing nurses’ knowledge gaps regarding the care of women experiencing precipitous labors and to assess the effectiveness of team training and their use of standardized OB triage methods. One study (Hughes et al., 2016) conducted systematic reviews of random controlled clinical trials (RCTs), case-control, and cohort studies to demonstrate the effectiveness of team training in the healthcare industry. A study specifically focusing on OB emergency preparedness compared variations in training and the need for standardized education regarding correct OB triage methods (Subrahmanyam, Joseph, & Abraham, 2017). Another study reported the effectiveness of using a standardized tool specific to OB triage (Ruhl, Scheich, Onokpise, & Bingham, 2015). Lastly, a systemic review was conducted by evaluating team behaviors during OB emergencies (Onwochei, Halpern, & Balki, 2017). All the methods yielded valid results as noted by each study.

Team training in OB emergency care will be a promising avenue for optimizing emergency response and improving quality of care. Harmonizing existing and new efforts of multiple individuals to integrate standardized knowledge regarding care of women experiencing precipitous labor outside of the labor and delivery unit will eliminate knowledge gaps and improve patient outcomes. Quality of team collaboration and communication between the ED and OB nurses are also expected to improve.

Rationale for Interventions

Many ED nurses may become apprehensive with the chance that a delivery is imminent. If this occurs, obstetrical patients are best served if emergency protocols are in place. Creating and organizing a framework for the delivery of evidence based care is critical in reducing maternal and newborn complications. Interventions also aid in increasing education about

women experiencing precipitous labor and increasing communication between nurses of different specialties.

Specific Aims

The aim of this project was to implement quality improvement by enforcing a practice change by empowering the ED and OB nurses by addressing a knowledge gap regarding management of women experiencing precipitous labor. The “CODE LABOR” Policy will decrease challenges of communication between different units and improve patient outcomes.

Methods

A non-probability, quota sampling method was used for all nurses working in the ED and OB units. A sampling of 57 Registered Nurses (RNs) working in Labor and Delivery and Emergency Department settings with average age of 31-40 years ($\bar{x}=35.5$) and an average experience of 5-10 years ($\bar{x}=7.5$) in bedside nursing participated in the study. A quasi-experimental design was used to influence quality improvement in the healthcare setting and to improve overall organizational and patient outcomes.

Interventions. Pre- and post-educational session surveys were utilized to evaluate perceived limitations and improvements in interdisciplinary communication and care of women experiencing precipitous labor. Secondly, educational sessions were conducted to promote policy change. The educational sessions uncovered mixed existing knowledge and encouraged additional learning regarding care of women experiencing precipitous labor and delivery. Each session was delivered by the author using a PowerPoint presentation and lecture on multiple occasions. Another intervention included the revision of and development of organizational policy within the hospital, “CODE LABOR” (see *Appendix A*) with the concurrent use of an OB

assessment algorithm called the “CODE LABOR Care Pathway” (see *Appendix B*). This information was discussed during the educational sessions.

Outcomes, measurement, data collection. Data collection included: (1) reviewing Hospital Consumer Assessments of Healthcare Providers and Systems (HCHAPS) reports from the rural hospital in northern Alabama to evaluate organizational and patient outcomes, (2) evaluating pre- and post-educational session surveys regarding the staff’s comfort level when caring for women experiencing precipitous labor and delivery and the staff’s perceived level of communication with colleagues on other nursing units, and (3) the conduction of retrospective chart reviews of women who have experienced precipitous deliveries to evaluate neonatal indicators such as Apgar scores ≥ 7 at 5 minutes.

Educational sessions developed and promoted existing knowledge and encouraged additional learning regarding care of women experiencing precipitous labor and delivery by the CODE LABOR Policy and the CODE LABOR Care Pathway. RNs reported a better sense of the woman’s experience, their role during a precipitous labor, and different methods to engage in or activate for teamwork and communication. Implementation of the project led to the development of the CODE LABOR Kit (items necessary for the delivery of a fetus) to be placed along with a precipitous delivery tray in an easily accessible area in the ED triage area. Instead of everyone searching for necessary items during a precipitous delivery, the ED and OB RNs stated that having the CODE LABOR Kit in one place added sense of calm during the event. Additionally, the implementation of the project also led to the development of a goal to have practicing obstetricians and ED physicians included in the education processes.

Analysis. Paired t-test analyses revealed that statistically significant learning occurred with p value < 0.5 . Post-test data revealed improved feelings of interdisciplinary communication

and collaboration between the OB and ED nurses. Post-test data revealed improved comfort levels while caring for a woman experiencing precipitous labor and delivery outside of the L&D unit. Data specific to the OB unit were evaluated for process improvement related to patient experience as reported by patient observation. Published fourth quarter 2018 data disclosed an 84.3% satisfaction rate of nurse to patient communication and a 70.6% recommendation of the hospital to friends and family (n=17). First quarter 2019 data revealed an 80.2% satisfaction rate of nurse to patient communication and 71.7% that would recommend the hospital to friends and family (n=10).

Ethical Considerations. Many complex factors, including professional support by nurses can influence the patient’s ethical principles of autonomy, veracity, beneficence, and informed consent. Basic standard of care should be applied when caring for laboring women, framed by the ethics of nursing care. OB assessment skills, critical decision making processes, collaborative communication, teamwork, and maternal/newborn outcomes should be paramount in the RNs’ scope of practice when caring for a woman experiencing precipitous labor outside of the L&D unit.

Evaluation Plan

Routine email reminders and scheduled visits with the ED and OB nurses should be conducted by senior RNs to reinforce the use of the CODE LABOR Policy and the “CODE LABOR Care Pathway” as an evidence based practice guideline during nursing encounters with women experiencing precipitous deliveries outside of the L&D unit. Formative evaluations of project implementation include soliciting feedback from the CNO, Director of Women’s and Children’s Services, and Director of Emergency Services. Other information for evaluation include patient outcomes gathered from various organizational reports and post-precipitous

delivery newborn data, feedback from the ED RNs concerning their level of comfort, and feedback from the OB and ED RNs concerning increased communication and teamwork. Continued dissemination and sustainability of the project should be managed by the organization’s education department.

Conclusion

Obstetrical emergencies are challenging tasks that require specific education and maneuvers to manage safely. Clinical administrators and nurses working in the OB and ED units must fully harness labor and delivery policy guidelines to continue to capture knowledge gaps and improve interdisciplinary communication and teamwork. The CODE LABOR Policy will establish a new culture of caring for the OB patient in settings outside the L&D unit and CODE LABOR can easily be adapted for use in other healthcare facilities.

References

- American College of Obstetricians and Gynecologists (ACOG). (2016). Committee Opinion No. 667: Hospital-based triage of obstetric patients. *Obstetrics & Gynecology*, 128(1), e16-e19. Doi: 10.1097/ACOG.0000000000001524
- Association of Women’s and Neonatal Nursing (AWOHNN). (2018). Maternal-Fetal Triage Index. Retrieved from <https://www.awhonn.org/page/MFTI>
- Centers for Disease Control (CDC). 2018. National Vital Statistic Reports, 67(1). Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_01.pdf
- Emergency Nurses Association (ENA). (2018). Obstetrical Patients in the Emergency Care Setting. *Journal of Emergency Nursing*, 44(1), 71-73.
- ENA. (2017). ENA Position Statement: Triage Qualifications and Competency. Retrieved from https://www.ena.org/docs/default-source/resource-library/practice-resources/position-statements/triagequalificationscompetency.pdf?sfvrsn=a0bbc268_8
- Hughes, A. M., Gregory, M. E., Marlow, S. L., Lacerenza, C. N., King, H. B., Joseph, D. L. ..., Salas, E. (2016). Saving lives: A meta-analysis of team training in healthcare. *Journal of Applied Psychology*, 101(9), 1266-1304. <http://dx.doi.org/10.1037/ap10000120>
- Lundeen, S., Padilla, M. S., and Rhodes, S. (2015, August). Creating a Culture of Teamwork. In V. Henderson, *Global Nursing eRepository: A Sigma Resource*. Symposium conducted at the meeting of Sigma Theta Tau Biennial Convention, Las Vegas, NV.
- Onwochei, D. N., Halpern, S., & Balki, M. (2017). Teamwork assessment tools in obstetric emergencies: A systematic review. *Simulation in Healthcare*, 12(3), 165-176. Doi: 10.1097/SIH0000000000000210
- Ruhl, C., Scheich, B., Onokpise, K., & Bingham, D. (2015). Content validity testing of the

- Maternal Fetal Triage Index (MFTI). *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 44, 701-709.
- Smith, K., Leash, J., Cadawas, T., Aguilar, J., Garavente, E., McMullen, M., & Boschulte, D. (2013). Improving Obstetric Rapid Response Teams: Multidisciplinary Simulation Training Using the Plan-Do-Study-Act Cycle. *JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing*, 42S, 56-57. Doi: 10.1111/1552-6909.12133
- Subrahmanyam, N., Joseph, J., & Abraham, R. (2017). Obstetric emergency preparedness among staff nurses working in obstetric care units. *International Journal of Reproduction, Contraception, Obstetrics, and Gynecology*, 6(7), 2960-2963. <http://dx.doi.org/10.18203/2320-1770.ijrcog20172916>
- Suzuki, S. (2015). Clinical Significance of Precipitous Labor. *Journal of Clinical Medicine Research*, 7(3), 150–153. <http://doi.org/10.14740/jocmr2058w>

Appendix A

CODE LABOR Policy and Procedure

Rural Hospital in Northern Alabama

Policy Title: CODE LABOR

Audience: Women’s and Children’s and Emergency Department

References and Citations: See below.

STATEMENT OF PURPOSE:

To provide standardized guidelines for the interdisciplinary management of obstetrical patients who present to the facility for care.

PROCEDURE:

- A. The ED RN will assess the obstetrical patient according to the CODE LABOR Care Pathway.
- B. Women who have a life-threatening condition, are unstable, or needing emergent care (in association with or independent of their pregnancy) will remain in the ED. Labor and Delivery will be notified immediately if the gestation is above 20 weeks. The ED RN, OB RN, ED nurse practitioner, or the ED physician will notify the obstetrician on call of the obstetrical patient’s situation and condition.
- C. Women above 20 weeks gestation who are at risk for imminent delivery, the operator will page “CODE LABOR” overhead. The OB Emergency Response Team (OBERT) will immediately dispatch to the ED.
- D. Women over 20 weeks gestation, who are not in emergent need or not having signs and symptoms of labor, will be triaged by the ED RN using the CODE LABOR Care Pathway. The ED RN will consult with the L&D Charge Nurse by telephone and determine the best location of care and bed assignment. All obstetrical patients greater than 20 weeks must have an obstetric and fetal trail evaluation, regardless of presenting complaint, by a qualified RN and/or OB provider prior to discharge.
- E. The ED RN will provide the obstetrical patient’s gestational age, chief complaint, and vital signs as indicated by the CODE LABOR Care Pathway. The ED RN will provide the obstetrical patient’s gestational age, fetal heart tones, chief complaint, and vital signs as guided by the CODE LABOR Pathway.
- F. Women less than 20 weeks will be assessed in the ED. If complaints of abdominal pain, vaginal bleeding, or syncope exist, early consultation with the obstetrical provider is appropriate.

References

- American College of Obstetricians and Gynecologists (ACOG). (2016). Committee Opinion No. 667: Hospital-based triage of obstetric patients. *Obstetrics & Gynecology*, 128(1), e16-e19. Doi: 10.1097/ACOG.0000000000001524
- Association of Women’s Health, Obstetrics, and Neonatal Nursing (AWHONN). (2018). *Maternal Fetal Triage Index* [Video File]. Retrieved from <https://www.awhonn.org/page/MFTI?>
- Chagolla, B. A., Keats, J. P., & Fulton, J. M. (2013). The importance of interdepartmental collaboration and safe triage of pregnant women in the emergency department. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 42, 595-605.

Appendix B

CODE LABOR Care Pathway



